

### ABSTRACT OF THE DISCLOSURE

A tree-structured dynamic encoder generates an N-bit encoder output word in response to each encoder input word of a sequence of encoder input words, such that the number of encoder output word bits of value 1 equals a value of the encoder input word and such that positions bits of value 1 within the N-bit encoder output word for each give value of encoder word varies with time. Some or all of the switching blocks produce more than two block output words in response to each block input word. The dynamic encoder includes a tree of switching blocks, each dynamically encoding a block input word into more than one block output words, each having fewer bits than the block input word. A sum of values of the output words of each switching block always equals a value of that block's input word. A switching block of the highest layer of the tree receives each successive encoder input word as its block input word, and each switching block of each layer of the tree other than a lowest layer supplies each of its at least two block output words as a block input word to a separate switching block of a next lower layer of the tree. Each switching block of the lowest layer of the tree generates single-bit block output words, each forming a separate bit of the N-bit encoder output word.